



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,006	01/18/2006	Yasuyo Sogawa	28951.1169	7173
53067 7590 06/01/2007 STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVE., NW WASHINGTON, DC 20036			EXAMINER CRAWFORD, LATANYA N	
			ART UNIT 2809	PAPER NUMBER
			MAIL DATE 06/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/565,006

Applicant(s)

SOGAWA ET AL.

Examiner

LaTanya Crawford

Art Unit

2809

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Jan. 18, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date April 18, 2006 & Jan. 8, 2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by **Sano (US Patent 5,982,183)**.

**Regarding claim 1**, Sano et al. discloses a probing device (probe card) used for testing IC devices comprising a semiconductor integrated circuit including: pads, and wirings which are electrically connected to the pads, wherein said wirings are connected to bumps of a probe card in an area other than an area where the pads are disposed within the semiconductor integrated circuit (**column2, lines 41-47; column 1, lines 57-63**).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 2 & 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sano (US Patent 5,982,183)** in view of **Shih (US Patent 6,286,208 B1)**.

**Regarding claim 2**, Sano et al. invention discloses all of the claimed limitations from above, but fails to teach at least two of said wirings contacting one of said bumps without being in touch with each other.

However, Shih et al. ('208) teaches at least two of said wirings **22 (column 5, lines 63-67; column 6, lines 1-2)** contacting one of said bumps (solder ball) **32** without being in touch with each other (**Fig. 5**).

5. Given the teachings of Shih et al. ('208) it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the probing device (probe card) used for testing IC devices of Sano et al. with grouped wires contacting a solder ball or bump taught by Shih et al. ('208). Doing so would provide increased durability.

**Regarding claim 3**, Sano et al. invention discloses all of the claimed limitations from above, but fails to teach each of said wirings has at least one bent portion or angular portion.

However, Shih et al. ('208) teaches each of said wirings **17 and 22** has at least one bent portion or angular portion (**column 7, line 55**).

6. Given the teachings of Shih et al. ('208) it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the probing device (probe card) used for testing IC devices of Sano et al. with wirings having angular portions taught by Shih et al. ('208). Doing so would provide increased strength, compliance and durability of the medium for repeated connections and disconnections without degradation to the device.

Art Unit: 2809

7. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sano (US Patent 5,982,183)** in view of **Shih (US Patent 6,286,208 B1)** as applied to claim(s) above, and further in view of **Bokamper (US 2005/0029980 A1)**.

Regarding claim 4, Sano et al. invention as modified by Shih et al., discloses all of the claimed limitations from above, but fails to teach said wirings have separable portions.

However, Bokamper et al. teaches said wirings have separable portions ([0046], lines 3-4).

8. Given the teachings of Bokamper et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the probing device (probe card) used for testing IC devices of Sano et al. with individual separable wire links taught by Bokamper et al. Doing so would provide switching capabilities.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following reference(s) are cited for disclosing related limitations of the applicant's claimed and disclosed invention: **Shih et al. US Patent 6,523,255 B2, Wu et al. US 2004/0032025 A1, Beaman et al. US Patent 5,635,846, Tetsuaki et al. JP 2002-022809, Nagao et al. US 2003/0032263 A1, Nakata et al. US Patent 6,297,658 B1, Love et al. US Patent 5,477,160, Bottcher et al. US 2004/0100293 A1.**

Art Unit: 2809

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Crawford whose telephone number is (571) 270-3208. The examiner can normally be reached on Monday-Friday 7:30 AM -5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrell McKinnon can be reached on (571) 272-4797. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LaTanya Crawford



May 11, 2007



TERRELL L. MCKINNON  
SUPERVISORY PATENT EXAMINER